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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,037	12/31/2003	Toshihiro Fukuda	10122.005002	1938

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Osha & May L.L.P.
Suite 2800
1221 McKinney
Houston, TX 77010

EXAMINER

DEPUMPO, DANIEL G

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,037

Applicant(s)

FUKUDA ET AL.

Examiner

Daniel G. DePumpo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The Request to Correct Inventorship has been entered.
2. Applicant's election without traverse of Species I and Species B (figs. 2 and 9, claims 10-12 and 14 readable thereon) in the reply filed on 12/1/04 is acknowledged.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The disclosure is objected to because of the following informalities: It appears to be a literal translation into English from a foreign document and is replete with grammatical and idiomatic errors. Moreover, it is replete with typographical errors such as: toque (page 2, line 15) and reliving (page 3, line 24).

Appropriate correction is required.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 10, 11, 12 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 10 (last line) recites that the presser member and the ball screw nut are “unable to relatively rotate” (emphasis added). This recitation is not supported by the specification. The various species that limit the ability of the presser member to rotate are the use of a “resinous material”, a “frictional force” or “by caulking. Although these various structures will limit the

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ability of the presser member to rotate, the do not render it “unable” to rotate relative to the ball screw nut.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng ‘376.

Cheng teaches a steering apparatus having the structure as claimed. The device includes ball screw nut 72, a bearing 76 and a presser member 80. The frictional forces inherent in the

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installed presser member render the presser member and the ball screw nut unable to relatively rotate to the same degree as claimed and disclosed.

9. Claims 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuribayashi '311.

Kuribayashi teaches a steering apparatus having the structure as claimed. The device includes ball screw nut 7, a bearing 33 and a presser member 34. The frictional forces inherent in the installed presser member render the presser member and the ball screw nut unable to relatively rotate to the same degree as claimed and disclosed.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng '376 in view of Wallace.

As set forth above, Cheng teaches substantially all that is claimed. Cheng discloses that the presser member 80 comprises a "lock nut" which suggests that the nut contains some structure to limit rotation, or loosening, of the nut. Cheng does not specifically disclose the use of the shearing force of a resinous material. However, Wallace discloses the known use of a resin to lock a threaded coupling. It would have been obvious to modify to modify Cheng, by using a resin lock, as taught by Wallace, to prevent loosening of the presser member since Cheng discloses the use of a "lock nut" and since Wallace teaches that the use resin is desirable to

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oppose separation of threaded members, and because the prevention of loosening of the presser member is clearly desirable in a critical device such as a steering system.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi '311 in view of Wallace.

As set forth above, Kuribayashi teaches substantially all that is claimed, but does not disclose the use of the shearing force of a resinous material. However, Wallace discloses the known use of a resin to lock a threaded coupling. It would have been obvious to modify Kuribayashi by using a resin lock, as taught by Wallace, to prevent loosening of the presser member since Wallace teaches that the use of resin is desirable to oppose separation of threaded members, and because the prevention of loosening of the presser member is clearly desirable in a critical device such as a steering system.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng '376 in view of Wakabayashi.

As set forth above, Cheng teaches substantially all that is claimed. Cheng discloses that the presser member 80 comprises a "lock nut" which suggests that the nut contains some structure to limit rotation, or loosening, of the nut. Cheng does not specifically disclose the use of caulking. However, Wakabayashi discloses deforming a nut to provide for locking of a threaded coupling. This deformation is considered to constitute "caulking" as broadly claimed and disclosed by applicant. It would have been obvious to modify Cheng, by using caulking, as taught by Wakabayashi, to prevent loosening of the presser member since Cheng disclose the use of a "lock nut" and since Wakabayashi teaches that the use of caulking (or deformation) is

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desirable to oppose separation of threaded members, and because the prevention of loosening of the presser member is clearly desirable in a critical device such as a steering system.

14. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi '311 in view of Wakabayashi.

As set forth above, Kuribayashi teaches substantially all that is claimed, but does not specifically disclose the use of caulking. However, Wakabayashi discloses deforming a nut to provide for locking of a threaded coupling. This deformation is considered to constitute "caulking" as broadly claimed and disclosed by applicant. It would have been obvious to modify Kuribayashi, by using caulking, as taught by Wakabayashi, to prevent loosening of the presser member since Wakabayashi teaches that the use of caulking (or deformation) is desirable to oppose separation of threaded members, and because the prevention of loosening of the presser member is clearly desirable in a critical device such as a steering system.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel G. DePumpo whose telephone number is 703 308-1113. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 703 308 1113. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel G. DePumpo
Primary Examiner
Art Unit 3611

dgd
1/20/05